IS TYPE IDENTITY INCOMPATIBLE WITH MULTIPLE REALIZATION?

Michael PAUEN
University of Magdeburg

Summary
It is commonly believed that there is a fundamental incompatibility between multiple realization and type identity in the philosophy of mind. This claim can be challenged, however, since a single neural type may be realized by different microphysical types. In this case, the identity statement would connect the psychological and the neural type, while the neural type, in turn, could be multiply realized by different microphysical types. Such a multiple realization of higher level types occurs quite frequently even within physics and it should be acceptable for physicalism in general.

Introduction
Multiple realizability of mental properties seems to be one of the most serious problems for the classical type identity theory. The identification of mental and physical properties appears impossible if mental types are multiply realized by different physical types. It is under dispute whether the mere conceivability of multiple realization already counts as a serious objection against the identity theory. Kripke has pointed out that psycho-physical identity statements have to be necessarily true if they are true at all. However, Kripke’s claim that the mere conceivability of multiple realization falsifies the identity theory has been disputed by Thomas Nagel (1974) and, more recently, by Christopher Hill (1997). According to Hill, the conceivability of a dissociation of the referents of an identity statement may result from factors that are irrelevant for the actual possibility of such a dissociation. Consequently, the mere conceivability of cases of pain that aren’t cases of neural state $p$ would not count by itself as an objection against the identification of pain with neural state $p$. 
Be that as it may, it is far less controversial that actual cases of multiple realization are incompatible with the identity theory in the philosophy of mind. David Rosenthal remarks:

Multiple realizability is the possibility that mental-state types are instantiated by states of distinct physiological types. It’s an empirical matter whether that’s actually the case. If it is, physical-state types don’t correspond to mental-state types, and the type identity theory is false. Rosenthal (1994, 351).

The same point has already been stressed in a classical paper by Putnam. Putnam (1975, 437) emphasizes that the identity theory would “collapse”, should there be cases of multiple realization and, what is more, he thinks that it is very likely that such cases actually occur.

In what follows, I will argue against the underlying assumption that identity and multiple realization are incompatible in the philosophy of mind. Cases of “identity-compatible multiple realization” are not only conceivable, but there is a serious chance that they exist in the real world.

In the first part of my paper, I will try to shed some light on the concepts of identity and multiple realization. In the second part, I will demonstrate that type distinctions generally apply to a particular level of scientific description. The following section makes it evident that the same is true for identity statements and statements of multiple realization. They, too, apply to different levels of description: while identity statements in the philosophy of mind typically associate neurobiological and psychological types, statements of multiple realization often refer to microphysical and psychological types. It follows that there is a chance for “identity-compatible multiple realization” if a neurobiological type can be multiply realized by various microphysical types. After a discussion of multiple realizability of special science types in general, I will argue in the fourth section that I am not splitting hairs: identity-compatible multiple realization is possible in the real world, although it is a matter of empirical investigation whether these cases really occur. Anyhow, my considerations should amount to a dismissal of one of the classical objections against the type identity theory: even actual cases of multiple realization of mental properties may be compatible with psycho-physical identity.